

## **RECAP 2003: What's New?**

This overview does not address all of the changes to RECAP but rather highlights the changes that affect daily implementation of the program. The information below only represents a brief synopsis of each change; please refer to the referenced section to review the change(s) in detail. Other text within the document has been added/changed/moved/deleted for clarification purposes. For a comprehensive review of all changes made to RECAP 2000, refer to the proposed revisions and/or the technical amendments documents which contain tracking (red print and strikeout/underline) for easy identification and review of the changes.

### **1.0 Introduction**

- The introduction contains a couple of statements regarding the transition of an on-going project from RECAP 2000 to RECAP 2003. In general, the management of an AOC/AOI may continue under RECAP 2000 until the current phase/task of the project has been completed and approved by the Department. Further assessment of the AOC/AOI shall be in compliance with RECAP 2003 unless otherwise approved by the Department.

### **2.1 Program Terminology**

- Revised definitions of ARAR, enclosed structure, surface soil, subsurface soil, and surface water.

### **2.4 Data Quality Assurance/Quality Control Requirements**

- Data used under RECAP shall be obtained from a laboratory accredited by the State of Louisiana.

### **2.5 Data Evaluation and Data Useability**

- Added RECAP Form 3 Analytical Data Evaluation (Appendix C).

#### **2.6.1.2 Site-specific Considerations for the Identification of the AOI**

- New section - Additional guidance on the identification of the AOI based on site-specific conditions.

#### **2.6.1.3 Soil AOI**

- The three soil intervals defined in RECAP 2000 [Surface soil (0-3 ft bgs), potential surface soil (0-15 ft bgs), and subsurface soil (> 15 ft bgs)] have been replaced with two soil intervals: surface soil (0-15 ft bgs) and subsurface soil (>15 ft bgs) in RECAP 2003.

### **2.6.2 Identification of the COC**

- Text has been added to clarify how to identify the COC for each option.

### **2.7 Exposure Assessment (formerly Development and Use of a Conceptual Site Model)**

- Section renamed and revised to include the exposure assessment text formerly present in Section 6.4.

### **2.8.2 AOIC for MO-1, MO-2, and MO-3 Assessments**

- Exposure concentration/source concentration terminology replaced with AOI concentration (AOIC).
- Section revised to be consistent with redefined soil intervals of 0-15ft bgs and >15 ft bgs.
- Added guidance on determining AOIC for Soil<sub>es</sub>.
- Added guidance on the use of weight-wet vs dry weight data.

### **2.9 Land Use**

- Minor corrections to NAICS group numbers defining industrial land use.

### **2.10 Groundwater Use**

- For aquifers hydraulically connected to a surface water body, the zone may be classified as groundwater 3 zone if the Submitter adequately demonstrates that the well yield measurements are influenced by pumpage from the surface water body.

### **2.11 Groundwater Point of Exposure/Point of Compliance**

- Added guidance on the identification of the POC and the POE for GW<sub>es</sub> and GW<sub>air</sub>.

### **2.12 Screening Standards and RECAP Standards**

- New section added that defines all of the SS and RS.
- Text formerly in Section 6.8.3 now located in Section 2.12.6.
- Major changes to the identification and application of RS:
  - GW<sub>air</sub> is required to be included in the identification of the limiting RS for MO-1, MO-2, and MO-3 for groundwater (GW 1, 2, and 3 zones) present at a depth of < 15 ft bgs that is impacted with a volatile constituent (MO-1 GW<sub>air</sub> values are included in Table 3).
  - The GW<sub>es</sub> pathway may now be addressed under MO-1 (MO-1 GW<sub>es</sub> values are now included in Table 3).
  - The Soil<sub>es</sub> pathway may now be addressed under MO-1 (MO-1 Soil<sub>es</sub> values are now included in Table 2).

### **Section 2.13 Identification of a Background Concentration**

- Minimum of 4 data points are required to establish a site-specific background level.
- If the background data set consists of  $\leq 7$  data points, then the arithmetic average shall be used to represent background level.
- If the background data set consist of  $\geq 8$  data points, the background level maybe based on the arithmetic average + one standard deviation (refer to 2.13 for more details).

### **Section 2.14.2 ARARs**

- New section on the use of ARARs under RECAP; new FAQ on the use of an OSHA PEL as an ARAR under RECAP (site-specific determinations to be made by the Toxicological Services Section).

### **Section 2.14.4 Acute Health Risks**

- New section that addresses the issue of possible health risks associated with short-term exposure for sensitive subpopulations (children/metals in soil). This is generally not a concern for the sites dealt with on a day-to-day basis.

### **Section 2.14.5 Ecological Risks**

- New section that provides additional clarification on defining acceptable ecological risks for ecological risk assessments.

### **Section 2.15 Identification of Toxicity Values**

- New section that provides guidance on the identification of toxicity values for the development of SS and MO-1 RS for COC not in Tables 1-3 and for the development of MO-2 and MO-3 RS. Toxicity assessment text that was formerly in Section 6.5 is now located in this section.

### **Section 2.16 Monitored Natural Attenuation**

- Additional guidance on the use of MNA under RECAP (consistent with EPA guidance).

### **Section 2.17 Institutional Controls**

- Clarification that if the residual COC concentration in soil is  $> \text{Soil}_{\text{ni}}$ , then a conveyance notification shall be place on the property.
- Clarification that if the residual COC concentration in a groundwater 2 aquifer is  $> \text{GW}_2$  (w/o DF2), then a conveyance notice shall be place on the portion of the plume within the property boundaries.

## **Section 2.18 Self-Implementation of RECAP**

- Additional guidance on self-implementation of site investigation.

## **Section 2.19 Demonstration on Compliance with RECAP Standards**

- New section that provides guidance on demonstrating that an AOI complies with RECAP.

## **Section 2.20 Identification of Landowners, Lessees, and Servitude Holders**

- New section that sets forth landowner identification requirements for offsite migration.

## **Section 3.0**

- Added a summary of general data requirements for the SO for easy reference.

### **Section 3.1.1 General Criteria**

- Omitted the criteria that the same receptor is not exposed to the same COC via soil and groundwater.

### **Section 3.1.2 Criteria for Impacted Soil**

- Additional exceptions listed for the criterion based on area of impacted soil < 0.5 acre.

## **Section 3.4 SO Submittal Requirements**

- Additional submittal requirements (RECAP forms, Appendix C) for the SO.

## **Section 4.0 Management Option 1**

- GW<sub>air</sub>, GW<sub>es</sub>, and Soil<sub>es</sub> pathways may be addressed under MO-1; default RS are presented in Tables 2 and 3.
- Added a summary of general data requirements for MO-1 for easy reference.

### **Section 4.1.1 General Criteria**

- Omitted the criterion that the same receptor is not exposed to the same COC via soil and groundwater. MO-1 RS can be adjusted to account for additive effects due to exposure to soil and groundwater (via drinking).
- Omitted the criterion that the soil to enclosed structure is not of concern at the AOI. The soil to enclosed structure pathway may be addressed under MO-1.

### **Section 4.1.2 Criteria for Impacted Soil**

- Additional exceptions listed for the criterion based on area of impacted soil < 0.5 acre.

### **Section 4.1.3 Criteria for Impacted Groundwater**

- Omitted the criterion that the groundwater to enclosed structure pathway is not of concern at the AOI. The groundwater to enclosed structure pathway may be addressed under MO-1.
- Omitted the criterion that the groundwater to ambient pathway is not of concern at the AOI. The groundwater to ambient air pathway may be addressed under MO-1.

### **Section 4.3 MO-1 Submittal Requirements**

- Additional submittal requirements (RECAP forms, Appendix C) for MO-1.

### **Section 5.0 Management Option 2**

- Added a summary of general data requirements for MO-2 for easy reference.

### **Section 5.3 MO-2 Submittal Requirements**

- Additional submittal requirements (RECAP forms, Appendix C) for MO-2.

### **Section 6.0 Management Option 3**

- Option MO-3A (baseline risk assessment) has been omitted; the Submitter must develop site-specific MO-3 RS.
- Added a summary of general data requirements for MO-3 for easy reference.

### **Section 6.9 MO-3 Submittal Requirements**

- Additional submittal requirements (RECAP forms) for MO-3.

### **Tables 1, 2, and 3**

- SS and RS updated based on revised EPA toxicity values and default parameters.
- Table 2 includes MO-1 Soil<sub>es</sub>.
- Table 3 includes MO-1 GW<sub>es</sub> and GW<sub>air</sub>.

### **Appendix B**

- Clarification of air sampling guidelines.
- Added groundwater reporting submittal requirements.

## **Appendix C**

- Added a number of new submittal forms to promote consistency in RECAP submittals received by the Department and thus assist the Department in the review of submittals.
- Ecological checklist (RECAP Form 18): The area of impacted soil that triggers a screening level ecological risk assessment has been increased from 1 acre to 5 acres.

## **Appendix D**

- TPH – redefined the carbon ranges for TPH-G, TPH-D, and TPH-O to be consistent with SW846 Method 8015 B.
- TPH- changes in the methods recommended for the analysis of the TPH fractions and TPH-G, D, and O mixtures.
- TPH- added target organ/critical effect table for petroleum constituents.
- Updated lead model default values.
- Added surrogate toxicity values for a few PAHs.
- Added guidance for addressing polychlorinated dioxins and furans using the TEF approach.
- Added guidance for addressing nontraditional parameters (chlorides, pH, etc).

## **Appendix G**

- Revised examples of additivity.
- Added a table of the target organs/critical effects for the COC listed in Tables 1-3.

## **Appendices H, I, J**

- Appendices H (SO), I (MO-1), and J (MO-2) were combined into one appendix.
- Guidelines for MO-3 are included.
- A table of contents was added and all of the equations have been numbered for easy reference.
- Default values were updated based on current EPA recommendations.
- The  $C_a$  (acceptable air concentrations) values for the calculation of the  $Soil_{es}$ ,  $GW_{es}$ , and  $GW_{air}$  have been revised to include the use of LAC 33.III Ch. 51 Table 51.2 air standards in addition to risk-based standards (as calculated under RECAP 2000). Refer to Section H2.3 for further details.
- Added additional guidance on the identification and application of the limiting SS and RS and other site data (SPLP, indoor air sampling, etc).

## **Appendix I**

- Formerly Appendix K.
- Updated to be consistent with other revisions to the document.
- Added a table of contents for easier reference.